

Meeting Notes
NORTH DELTA IMPROVEMENTS GROUP (NDIG)
Wednesday, May 5, 2004
9:30-Noon at Jones & Stokes (2600 V Street)

ATTENDANCE LIST:

Burkholder, Brad	California Department of Fish and Game (DFG)
Crouch, Craig	County of Sacramento Department of Water Resources
Darsie, Bill	KSN, Inc.
DeLeon, Suzanne	California Department of Fish and Game (DFG)
Fleenor, Bill	University of California, Davis (UCD)
Harvey, Tom	United States Fish and Wildlife Service (FWS)
Hoppe, Walt	Point Pleasant
Knittweis, Gwen	California Department of Water Resources North Delta (DWR)
Labrie, Gil	DCC Engineering
Martin, Monica	California Department of Water Resources North Delta (DWR)
Martin, Sara	Jones & Stokes
Miyamoto, Joe	East Bay Municipal Utilities District (EBMUD)
Mount, Jeff	University of California, Davis (UCD)
Orcutt, Bob	California Department of Fish and Game (DFG)
Schmutte, Curt	California Department of Water Resources North Delta (DWR)
Toor, Surjit	Natural Resources Conservation Service (NRCS)
Trieu, Don	MBK Engineers
Van Loben Sels, Topper	Delta Protection Commission (DPC)/North Delta Water Agency (NDWA)
Vogelsang, Chuck	California Department of Water Resources (DWR)
Whitener, Keith	The Nature Conservancy (TNC)
Zemitis, Collette	California Department of Water Resources North Delta (DWR)

HANDOUTS

- Meeting Agenda
- Meeting Summary from March 3, 2004 meeting

1. INTRODUCTIONS AND WELCOME – Gwen Knittweis, DWR

Gwen Knittweis welcomed everyone to the meeting, facilitated a round of introductions, and ensured that everyone had copies of the handouts. Curt Schmutte then informed the group that he was pleased with the results of March's NDIG meeting, where all meeting attendees voted on 12 sets of tradeoffs relating to project goals. He reiterated DWR's commitment to balancing the conflicting needs and interests of North Delta stakeholders. He also announced that Senator Feinstein managed to pass through the senate an appropriation of \$400 million for California water projects. DWR is currently working to figure out if any of that money could be used for the North Delta Flood Control and Ecosystem Restoration Project. As finding a funding source has been the most difficult aspect of the project to date, Mr. Schmutte again asked the members of the NDIG to do whatever they can to get funding sources flowing towards the North Delta project.

Bill Darsie asked about the current relationship of the Army Corps of Engineers (Corps) to the project. Mr. Schmutte answered that the Corps is not currently involved, but that it will be easy for them to jump in, since the EIR will be NEPA-friendly.

2. SCIENCE ADVISORY PANEL BRIEFING – Dr. Jeff Mount, UC Davis

Mr. Schmutte introduced Dr. Jeff Mount from UC Davis, who has been heading up the North Delta Science Advisory Panel (Panel). The Panel consists of many technical experts in the fields of water quality, ecology, and hydrology, and the members are helping the North Delta team to develop ecological restoration alternatives.

Dr. Mount informed the group that the second Panel meeting occurred on April 7, with the attendance of the following experts:

Mercury, Carbon, and Water Quality

- Mark Marvin-Dipasquale (USGS)
- Roger Fujii (USGS)
- Randy Dahlgren (UCD)

Ecology, Exotics, and Mosquitoes

- Lars Anderson (UCD)
- Bill Bennett (UCD)
- Peter Moyle (UCD)
- Sharon Lawler (UCD)

Hydraulics/Hydrology and Geomorphology

- Jon Burau (USGS)
- Geoff Schladow (UCD)
- Bill Fleenor (UCD)
- Jeff Mount (UCD)
- Joan Florsheim (UCD)
- Denise Reed (University of New Orleans)

At the beginning of the April 7 meeting, the Panel heard a presentation from Bill Fleenor (UCD) on the results of MIKE-11 modeling performed in the past for North Delta alternatives. Dr. Mount introduced Dr. Fleenor, who recapped the Panel presentation for the NDIG.

MIKE-11 Modeling Results

Dr. Fleenor began a PowerPoint presentation and explained that the MIKE-11 model is a one-dimensional, looped unsteady flow model that has recently been expanded to include all of the north delta area. It has been calibrated to the 2, 10, and 25 year storm events including 1986, 1998, 1999, and 2000. This particular model is being used to model everyday tidal influence as well as low-flow events to analyze the feasibility of the ecosystem restoration ideas for McCormack-Williamson Tract (M-W Tract).

The first round of MIKE-11 modeling for the North Delta project was performed in 2002 and included an examination of average low-low-water and high-high-water levels to assist the project team in determining which habitat zones—subtidal, intertidal, and supratidal—would be available under each scenario.

The conclusions reached through MIKE-11 modeling for the 2002 scenarios were as follows:

1. All flood control alternatives reduced water levels at Benson's Ferry, and most alternatives reduced water levels at New Hope Tract.
2. There was a large variation between scenarios as far as available habitat types were concerned.
3. Passing more water through M-W Tract raises water levels at New Hope tract during large storm events.

North Delta staff has since designed seven new alternatives. The MIKE-11 modeling conclusions for the new alternatives are:

1. All flood control scenarios reduce water levels at Benson's Ferry and most reduce water levels at New Hope Tract.
2. All scenarios have identical water level results for the 10- and 25-year storm events.
3. Each alternative has the potential to support all habitat types.
4. With habitat restoration scenarios included, there is a flood peak reduction at Benson's Ferry, but also a flood peak increase at New Hope Tract.

Walt Hoppe observed that the results of the modeling seemed to show a lot of subtidal habitat, and asked if that was desirable. Dr. Mount responded that with lots of subtidal habitat, the goal would be to get plants to colonize the area to encourage sedimentation. Dr. Fleenor said that if the right plants are established, sedimentation should evolve quite rapidly.

Craig Crouch (Sacramento County) asked whether the objectives of CalFed include maximizing intertidal habitat. Keith Whitener (TNC) answered there is a lot of debate about the desirability of intertidal habitat—many experts in exotic species feel that intertidal habitat is the most conducive to supporting exotics. Mr. Schmutte pointed out that the goal of the project is to restore a diverse suite of ecological processes; not just intertidal processes.

Monica Martin (DWR) asked if UCD plans to model the synthetic 100-year hydrology through the MIKE-11 model. Dr. Fleenor answered that they are interested in running the synthetic hydrology if funding becomes available.

Science Panel Objectives

Dr. Mount then explained that after Dr. Fleenor's modeling presentation at the Panel meeting, Collette Zemitis presented the ecological objectives of the North Delta project. The objectives are as follows:

1. Restore ecological processes.
 - a. Promote natural flooding processes and tidal action.
 - b. Allow channel migration.
 - c. Promote sediment deposition, especially to increase elevation in areas of subsidence.
 - d. Promote foodweb production and water exchange with adjacent channels.
2. Restore self-sustaining habitats including freshwater tidal marsh, seasonal floodplain, and riparian habitats.
3. Support special-status species.
4. Limit exotic species establishment.

The principles of the project, which were used as guidance for the scientists on the Panel, were then presented:

1. Enhance processes.
2. Maximize disturbance.
3. Promote diversity.
4. Achieve sustainability.

Finally, the project constraints were presented to the scientists on the panel:

1. Protection of the KCRA TV tower

2. The east levee of M-W Tract must be lowered to no less than 8.5' msl.
3. The project must not increase flood stage levels.
4. Levees must be wildlife-friendly.
5. It might be difficult to find borrow materials.

The alternatives were then sorted into three groups: fluvially-dominated scenarios, tidally-dominated scenarios, and tidal/floodplain hybrids. The panel members were also sorted into three groups, according to area of expertise, as listed above. Each group was asked to analyze the alternatives, respond to a list of critical questions, identify critical uncertainties, propose potential adaptive management experiments, and list concerns or recommendations for modifications to the alternatives.

Science Panel Results: Hydraulics/Hydrology and Geomorphology Group

Dr. Mount recapped the Hydraulics/Hydrology and Geomorphology results with the phrase, “it’s all about sediment”. This group felt that sediment is a fundamental limiting resource, and as such, sediment capture should be an important objective of the North Delta project. Other conclusions included:

- The group prefers a secondary channel on M-W Tract, as opposed to a new primary channel, if a channel is to be designed.
- Secondary channels will self-form if the levees are breached and outlets are provided.
- An excavated channel through M-W Tract could potentially enhance sedimentation on the lower portion of the island, but it would also have the potential to plug the existing channel.
- The lowering of the east levee to 8.5' msl reduces the geomorphic effectiveness of levee breaches and secondary channels, as it would allow the water to flow over the east levee earlier during flood events instead of forcing the waters through the secondary channel and breach.
- Adaptive management of M-W Tract is essential, but it is important to establish a trajectory of change.
- Both tidal and fluvial options are possible—they don’t need to be separated.
- Daily tidal action is unlikely to deliver significant sedimentation; augmentation to build elevations may be necessary. Some group members suggested using sediments dredged from Snodgrass Slough buildup.

Consensus: M-W is an historically fluvially-dominated system, not tidally-dominated.

Bottom Line: All of the alternatives are feasible, but the avulsed (new primary) channel is not a good idea.

Science Panel Results: Ecology, Exotics, and Mosquitoes

The conclusions of the Ecology, Exotics, and Mosquitoes group included:

- The fluvial scenarios will support birds and native fish through a mosaic of riparian habitat and will minimize standing water.
- Important to monitor and manage exotics.
- Promote flooding from January through May and keep the island dry the rest of the year to maximize native fish production, to reduce exotics, and to discourage mosquitoes.
- Sedimentation and dynamic topography on M-W Tract should be encouraged, with possible wetlands on the lower end of the island.

- Tidal/fluviial hybrids have pros and cons. Con: could encourage exotics invasion. Pro: more sustainable, complex habitats.
- Should seek to build elevation on lower end of M-W Tract.

Science Panel Results: Mercury, Carbon, and Water Quality

Dr. Mount prefaced his summary of the Mercury, Carbon, and Water Quality group by stating that the results of their conversations will be written up within the next month—for now, Dr. Mount could not provide a complete summary.

- Mercury methylation is not a showstopper; it can be adaptively managed if it becomes a problem.
- Restoration of organic-rich floodplains will increase the levels of dissolved organic carbon.
- Opening up M-W Tract could be important for local foodwebs.

Science Panel Conclusions

At the end of the meeting, the science panel determined that the proposed alternatives were capable of meeting each of the project objectives described above. They noted that establishment of riparian habitats would best support special-status species, and that the project team may want to reexamine whether or not they want to establish freshwater tidal marsh habitat because of the likelihood that it would foster exotic species growth. Overall, there was considerable enthusiasm about the project alternatives among the members of the Panel; but there is lots of concern over exotic fish and plant species.

Topper Van Loeben Sels asked if the establishment of exotic plant species on M-W Tract would pose a risk to bridges and weirs during flood events. Dr. Mount answered that anything that established itself on M-W Tract would only contribute a negligible amount of mass during flood events.

Monica Martin asked if the Panel's Water Quality group had given any indication as to how they expect the project team to address organic compounds and mercury in the EIR. Dr. Mount said that no, they hadn't expressed their thoughts on the matter, but advised the project team to be as explicit as possible in the EIR about organic compound and mercury concerns, as well as the fact that these issues will need to be adaptively managed.

An NDIG attendee asked if the Panel and project team are thinking about global warming and sea-level change. Dr. Mount responded that the Panel did indeed consider sea-level rise and increased flow events, and added that water management will be a large concern for the North Delta team anyway because of the proximity of the Delta Cross-Channel and Commanche Dam.

Mr. Schmutte then thanked Dr. Mount and Dr. Fleenor for taking the time to attend our meeting and present the results of the Science Panel meeting.

3. ECOSYSTEM RESTORATION ALTERNATIVES UPDATE – Collette Zemitis, DWR

Collette Zemitis announced that since the April 7 Science panel meeting, the North Delta team has narrowed the ecosystem restoration options to three alternatives.

Alternative 1 – Fluvial Alternative

- **Objective:** long-term sustainability and sedimentation.
- Includes fluvial and tidal processes
- Secondary perennial channel with floodplain processes
- Possible inflatable dam at east end of M-W Tract

Alternative 2 – Floodplain Alternative

- **Objective:** encourage production of fish in floodplains and reduce exotics.
- Seasonal inundation from January through May; the east levee on M-W Tract would be lowered enough to allow annual flooding.
- Floodplain would be drained using Nekton gates in the South end of the island (some pumping may be necessary).

Alternative 3 – Floodplain with Subsidence Reversal Demonstration Project Alternative

- **Objective:** encourage production of fish in floodplains, reduce exotics, and encourage sedimentation in south end of M-W Tract.
- Includes an isolated subsidence reversal demonstration project to increase elevations.
- Restrict open water on interior of island.
- Potentially raise Sacramento Perch (a native species that has been extirpated from the Delta) for reintroduction

Ms. Zemitis explained that since the ecosystem restoration alternatives have been narrowed down, it is time to address permitting issues such as permitting for dredging and a streambed alteration agreement. Keith Whitener asked when the alternatives will be modeled on the UNET model. Gwen Knittweis responded that all of the alternatives will be modeled using UNET for the impact analysis, but that the project team does not expect a lot of variation in modeling results from the different ecosystem restoration alternatives; they are pretty neutral since the height of the east levee and other flood control components, such as the detention basins, control. However, NHC is working on modeling these alternatives for lower flow events and sediment dynamics.

4. EIR UPDATE – Sara Martin, Jones & Stokes

Sara Martin informed the group that the North Delta team anticipates completion of the public draft “NEPA-friendly” EIR in October of this year. Jones & Stokes is currently working to ensure all of the modeling, which includes water quality modeling, sediment modeling, and hydraulic modeling, is in place for the environmental impact analysis.

There will not be a preferred alternative in the Draft EIR, as the environmental impact analysis process will be used to help inform the selection of an alternative. There will be three main alternatives analyzed:

1. No Project Alternative.
2. Flood control with Staten Island detention with three options for detention basin design and three options for ecosystem restoration.
3. Flood control with no Staten Island detention; maximizing dredging and levee raising with three options for ecosystem restoration.

5. PROJECT RECREATION COMPONENTS – Gwen Knittweis, DWR

Ms. Knittweis announced that the project team has received some very helpful information from the Delta Protection Commission (DPC) that includes GIS data that shows the location of existing recreational facilities throughout the Delta. This information is being used to help determine the recreational components of the North Delta project. The project team has decided to focus on underrepresented recreational opportunities in the delta that are low-impact and could simply be enhancements. Some ideas include: non-motorized boat launches, hiking, and wildlife viewing. One important issue the North Delta project team is focusing on is how to ensure continuous funding for maintenance of recreational components.

Bill Darsie inquired as to whether limiting boat speeds will be a part of the recreational components. Mr. Schmutte responded that limiting boat speed is a highly controversial issue and that this project may not be the right forum in which to take it on. Keith Whitener expressed that it would be nice if a big entity, such as CalFed or the Department of Boating and Waterways would take on the issue. Mr. Darsie suggested, at the least, mentioning that it is an issue of concern in the EIR.

An NDIG attendee pointed out that access could be a big issue for the recreational components—that some private property may need to be acquired. Ms. Knittweis agreed that access is an issue and mentioned that the project is focusing mainly on improvements to existing facilities in part for that reason.

6. HYDRAULIC MODELING UPDATE – Gwen Knittweis, DWR

Ms. Knittweis announced that the Hydraulic Modeling Coordination Team (HMCT) is being reconvened. Past members of the HMCT included Bill Fleenor (UCD), Craig Crouch (Sacramento County), Mark Kubik (Ensign-Buckley Engineers), Don Trieu (MBK Engineers), and Reclamation Board members. Ms. Knittweis will follow up with an e-mail to set a date for the next HMCT meeting.

7. NEXT MEETING

The next meeting was scheduled for 9:30 a.m. to 11:30 a.m. on Wednesday, June 2, 2004 at Jones & Stokes. (This meeting was later cancelled and will be rescheduled after the Hydraulic Modeling Coordination Team meets). Long-term funding was suggested as a future agenda item.